

CLAIMS

1. A method of automatically grading an article of a given type, in particular an article of the garment type, that is formed by assembling a plurality of pieces, said
5 method being characterized in that it consists in:

using a grading mask having images of the pieces of a reference article of the same type as the type of the article to be graded and for a given base size, a plurality of geometrical grading regions, each of which
10 contains one or more characteristic points of a piece of the reference article, and grading formulae associated with respective ones of the various regions, each grading formula making it possible, in the associated grading region, and as a function of the variation in one or more
15 magnitudes of a scale of measurements, or of a predetermined increment value, to determine a displacement to be applied to the or to each characteristic point contained in said region for going from the base size to another size;

20 calling up the images of the pieces of the article to be graded for an article size corresponding to the base size of the grading mask;

placing the images of the pieces of the article to be graded on the grading mask in positions corresponding
25 to the positions of the pieces of the mask; and

automatically grading the pieces of the article to be graded on the basis of the grading formulae of the mask and of a chosen scale of measurements for the article to be graded.

30

2. A method according to claim 1, characterized in that, when a characteristic point of a piece of the article to be graded is included in a plurality of grading regions of the grading mask, the grading formulae of each of said
35 grading regions apply cumulatively to said characteristic point.

3. A method according to claim 1 or claim 2,
characterized in that the step of placing the images of
the pieces of the article to be graded in correspondence
with the images of the pieces of the grading mask is
5 followed by revising one or more grading regions of the
mask so that each grading region that includes a
characteristic point of a piece of the mask also includes
the corresponding characteristic point of the article to
be graded.

10

4. A method according to any one of claims 1 to 3,
characterized in that a grading mask is used that also
includes one or more special grading regions, each of
which includes an outline portion of a piece of the mask
15 and at least one special grading formula associated with
each special grading region and specifying a constraint
to be applied to the portion of the outline during the
grading, and, during the grading, the special grading
formula associated with a special grading region that
20 contains one or more outline portions of the piece of the
article to be graded is applied to the or to each outline
portion.

5. A method according to claim 4, characterized in that
25 the special grading formula expresses a constraint chosen
from at least one of the following outline portion
constraints: shape constraint, length constraint, and
orientation constraint.

30 6. A method of creating a grading mask for automatically
grading articles of a given type, in particular articles
of the garment type, that are formed by assembling a
plurality of pieces, said method being characterized in
that it consists in:

35 using images of the pieces of a reference article of
this type for a given base size;

positioning the images of the pieces of the article in a plane;

creating grading regions, each of the grading regions being defined by a geometrical zone of the plane and containing at least one characteristic point of a piece of the article; and

associating each grading region with a grading formula making it possible, in the associated grading region, and as a function of the variation in one or more magnitudes of a scale of measurements, or of a predetermined increment value, to determine a displacement to be applied to the or to each characteristic point contained in said region for going from the base size to another size.

7. A method according to claim 6, characterized in that that it further consists in creating one or more special grading regions, each of which includes a portion of the outline of a piece of the mask, and in associating each special grading region with at least one special grading formula specifying a constraint to be applied to the portion of the outline during grading.

8. A grading mask for automatically grading articles of a given type, in particular articles of the garment type, that are formed by assembling a plurality of pieces, said mask being characterized in that it has images of the pieces of a reference article of the same type as the type of the article to be graded and for a given base size, a plurality of geometrical grading regions, each of which contains one or more characteristic points of a piece of the reference article, and grading formulae associated with respective ones of the various regions, each grading formula making it possible, in the associated grading region, and as a function of the variation in one or more magnitudes of a scale of measurements, or of a predetermined increment value, to

determine a displacement to be applied to the or to each characteristic point contained in said region for going from the base size to another size.

5 9. A grading mask according to claim 8, characterized in
that it further includes one or more special grading
regions, each of which includes a portion of the outline
of a piece of the mask and at least one special grading
formula associated with each special grading region and
10 specifying a constraint to be applied to the portion of
the outline during the grading.

10. A set of grading masks as defined in claim 8 or 9,
characterized in that the grading masks are in a digital
15 form.